

**Notice of Allowability**

Application No.

10/090,727

Examiner

Stephan F. Willett

Applicant(s)

WEIGAND ET AL.

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/27/06.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

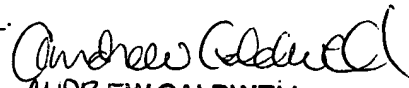
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
ANDREW CALDWELL  
PATENT EXAMINER

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 10/31/06; 9/7/06; 6/22/06; 2/15/06; 11/10/05.

**DETAILED ACTION**

***Examiner's Amendment***

1. Authorization for this Examiner's amendment was given in a telephonic interview with Mr. Rozylowicz on 9/27/06 and 10/3/06.

IN THE CLAIMS:

Subject to the authorization of Applicant, this proposed listing of claims would replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of streaming data units to terminals, the method comprising:

- using a duplicating switch to receive communications;
- using the duplicating switch to selectively filter the communications;
- receiving a received stream of data units at the duplicating switch, wherein the received stream is addressed to a unicast address associated with the duplicating switch and the data units include a payload portion and an attribute portion;
- using the duplicating switch to store content from the payload portion of the received stream;
- using the duplicating switch to generate forwarded streams that incorporate the content for use by two or more terminals having address information that was not part of the received stream; and
- in response to a request received at the duplicating switch, using the duplicating switch to forward the forwarded streams that incorporates the content, with each forwarded stream being forwarded to a unicast address of each of the two or more terminals,
- wherein the duplicating switch is structured and arranged to selectively filter the communications and forward the forwarded streams based on address information sent in the request to the duplicating switch.

2. (Original) The method of claim 1 wherein using the duplicating switch to store content includes storing content that is temporally related to the data units that are being generated.

3. (Previously Presented) The method of claim 1 further comprising using a location identifier to indicate which portion of content is being generated into the forwarded streams.

4. (Original) The method of claim 3 further comprising using location identifiers to access the content time-shifted as two different streams.

5. (Original) The method of claim 1 wherein using the duplicating switch to store content includes storing more than one instance of the same portion of content.

6. (Previously Presented) The method of claim 5 wherein using the duplicating switch to store content includes storing additional instances of the received stream as demand for the content increases.

7. (Original) The method of claim 1 wherein using the duplicating switch to store content includes storing content and associated header information.

8. (Original) The method of claim 1 wherein using the duplicating switch to store content includes storing a checksum describing the content.

9. (Previously Presented) The method of claim 1 wherein at least one of the forwarded streams is transmitted in response to receiving the request from a terminal.

10. (Previously Presented) The method of claim 1 wherein the forwarded streams are transmitted in response to receiving the request from a service provider.

11. (Previously Presented) The method of claim 1 wherein:  
storing the content includes using location identifiers to track simultaneous transmissions of a single stored instance of the received stream, and  
forwarding includes transmitting the different data units from within the single stored instance to several requestors who have terminals receiving the forwarded streams that overlap but differ by a time differential.

12. (Previously Presented) The method of claim 1 wherein the duplicating switch is a specialized device including hardware configured to perform one or more of receiving a received stream of data units, storing content from the received stream, generating forwarded streams, and making the forwarded streams available.

13. (Currently Amended) A duplicating switch comprising:

- means for using a duplicating switch to receive communications;
- means for using the duplicating switch to selectively filter the communications;
- means for receiving a received stream of data units that is addressed to a unicast address associated with the duplicating switch, wherein the data units include a payload portion and an attribute portion;
- means for storing content from the payload portion of the received stream;
- means for generating forwarded streams that incorporate the content for use by two or more terminals having address information that was not part of the received stream; and
- means for using the duplicating switch to forward the forwarded streams of data units that incorporates the content, each forwarded stream being forwarded to a unicast address of each of the two or more terminals, in response to a request received at the duplicating switch, wherein the duplicating switch is structured and arranged to selectively filter the communications and forward the forwarded streams based on address information sent in the request to the duplicating switch.

14. (Original) The duplicating switch of claim 13 wherein means for storing content includes means for storing content that is temporally related to the data units that are being generated.

15. (Previously Presented) The duplicating switch of claim 14 further comprising means for using a location identifier to indicate which portion of content is being generated into the forwarded streams.

Art Unit: 2142

16. (Original) The duplicating switch of claim 15 further comprising means for using location identifiers to access the content time-shifted as two different streams.

17. (Original) The duplicating switch of claim 13 wherein means for storing content includes means for storing more than one instance of the same portion of content.

18. (Original) The duplicating switch of claim 17 wherein means for storing content includes means for storing additional instances of the stream as demand for the content increases.

19. (Original) The duplicating switch of claim 13 wherein means for storing content includes means for storing content and associated header information.

20. (Original) The duplicating switch of claim 13 wherein means for storing content includes means for storing a checksum describing the content.

21. (Previously Presented) The duplicating switch of claim 13 wherein the means for generating the forwarded streams available include means for transmitting at least one of the forwarded streams in response to receiving the request from a terminal.

22. (Previously Presented) The duplicating switch of claim 13 wherein the forwarded stream is transmitted by the means for making it available in response to receiving the request from a service provider.

23. (Previously Presented) The duplicating switch of claim 13 wherein:  
means for storing the content includes means for using location identifiers to track simultaneous transmissions of a single stored instance of the received stream, and  
means for transmitting includes means for transmitting the different data units from within the single stored instance to several requestors who have terminals receiving the forwarded stream that overlap but differ by a time differential.

24. (Previously Presented) The duplicating switch of claim 13 wherein the generating means include a specialized device including hardware configured to perform one or more of receiving a received stream of data units, storing content from the received stream, generating forwarded streams, and making the forwarded streams available.

25. (Currently Amended) A duplicating switch comprising:  
a first communications interface structured and arranged to:  
    receive communications,  
    selectively filter the communications, and  
    receive a received stream of data units that are addressed to a unicast address associated with the duplicating switch, wherein each data unit includes a payload portion and an attribute portion;  
a storage processor structured and arranged to store content from the payload portion of the received stream;  
a switching processor structured and arranged to generate forwarded streams that incorporate the content for use by two or more terminals having address information that was not part of the received stream,  
and a second communications interface structured and arranged to forward the forwarded streams that incorporate the content in response to a request received at the duplicating switch, each forwarded stream being forwarded to a unicast address of each of the two or more terminals,  
wherein the duplicating switch is structured and arranged to selectively filter the communications and forward the forwarded stream based on address information sent in the request to the duplicating switch.

26. (Original) The duplicating switch of claim 25 wherein the storage processor is structured and arranged to store content that is temporally related to the data units that are being generated.



27. (Previously Presented) The duplicating switch of claim 26 further comprising a first memory processor structured and arranged to use a location identifier to indicate which portion of content is being generated into the forwarded streams.

28. (Original) The duplicating switch of claim 27 further comprising a second memory processor structured and arranged to use location identifiers to access the content time-shifted as two different streams.

29. (Original) The duplicating switch of claim 25 wherein storage processor is structured and arranged to store more than one instance of the same portion of content.

30. (Previously Presented) The duplicating switch of claim 29 wherein the storage processor is structured and arranged to store additional instances of the received stream as demand for the content increases.

31. (Original) The duplicating switch of claim 25 wherein the storage processor is structured and arranged to store content and associated header information.

32. (Original) The duplicating switch of claim 31 wherein the storage processor is structured and arranged to store a checksum describing the content.

33. (Previously Presented) The duplicating switch of claim 25 wherein the second communications interface is structured and arranged to make at least one of the forwarded streams available in response to receiving the request from a terminal.

34. (Previously Presented) The duplicating switch of claim 25 wherein the forwarded stream is transmitted by the second communications interface in response to receiving the request from a service provider.

35. (Previously Presented) The duplicating switch of claim 25 wherein:

Art Unit: 2142

the storage processor is structured and arranged to use location identifiers to track simultaneous transmissions of a single stored instance of the received stream, and

the second communications interface is structured and arranged to transmit the different data units from within the single stored instance to several requestors who have terminals receiving the forwarded streams that overlap but differ by a time differential.

36. (Previously Presented) The duplicating switch of claim 25 wherein the switching processor is a specialized device including hardware configured to perform one or more of receiving a received stream of data units, storing content from the received stream, generating forwarded streams, and making the forwarded streams available.

Art Unit: 2142

IN THE SPECIFICATION:

2. In the specification on page 1 replace the first paragraph with:

This application ~~claims the benefit~~ is a continuation-in-part of U.S. Application No. 09/893,692, filed June 29, 2001, and titled "GENERATING MULTIPLE DATA STREAMS FROM A SINGLE SOURCE"[;]. This application claims the benefit of U.S. Provisional Application No. 60/286,964, filed April 30, 2001, and titled "GENERATING MULTIPLE DATA STREAMS FROM A SINGLE SOURCE"; and U.S. Provisional Application No. 60/343,183, filed December 31, 2001, and titled "A DUPLICATING SWITCH FOR STREAMING DATA UNITS TO A TERMINAL", both of which are incorporated by reference.

*Allowable Subject Matter*

1. Claims 1-36 are allowed.

1. The following is an examiner's statement of reasons for allowance: independent claim(s)

1, 13, 25 use a duplicating switch to receive and selectively filter communications, the communications received is addressed to a unicast address and include a payload and attribute portion, the switch stores content from the payload portion, the switch incorporates the content for two or more terminals that were not addressed in the received communications and when a request for content is received at the switch the content is forwarded to unicast addresses of the terminals in the request.

2. The closest prior art of record, Urry, does not teach receiving a request at a switch to forward duplicated content to unicast addressed in the request. Therefore, independent claims 1, 13, 25 allowable over the prior art.

3. Claims 2-12, 14-24, 26-36 are allowed by the same rational as well as the further limitations added by these dependent claims.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2142

**Conclusion**

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephan Willett whose telephone number is (571)272-3890. The examiner can normally be reached Monday through Friday from 8:00 AM to 6:00 PM.

1. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell, can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

2. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

sfw

December 11, 2006

A handwritten signature in black ink, appearing to read "Andrew Caldwell". The signature is fluid and cursive, with the first and last names being more prominent.

ANDREW CALDWELL  
PATENT EXAMINER